

Divvying Atlantis: Who Owns the Land Beneath Navigable Manmade Reservoirs?

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I.

INTRODUCTION

For over a century, the federal government has been permitting dam-building on navigable rivers to create artificial reservoirs for irrigation, reclamation, and electrical power. Congress has granted dam permits under various legislation to both utilities and federal agencies.¹ Many of these federally flooded lands, containing oil, natural gas, precious minerals, and shellfish, have growing value. In addition, these lands serve as habitat for fish, wildlife, and plants. This ripening underwater investment poses the question of who owns the artificial Atlantean domains: the utilities, the states, or the federal government? It presents an issue not yet confronted by any court.

This article advocates for state ownership of the artificial federal reservoir basins. It first reviews the origin of the issue — why states might formulate such a claim. In Part II, this article reviews seven public policy considerations that support state ownership. Part III analyzes the legal arguments, considering first whether federal or state law applies. The article then considers the provisions of various state laws in sub-part B, and those of federal law in sub-parts C and D.

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1. See, e.g., Federal Power Act 16 U.S.C. § 797 (1994); Fort Peck Reservoir Act, Pub. L. No. 75-529, 52 Stat. 403 (1938); Reclamation Act of 1902, Pub. L. No. 57-161, 32 Stat. 388 (1902) (codified as amended in scattered sections beginning at 43 U.S.C. § 371).

II.

BACKGROUND & QUESTIONS

In general, each individual state owns the land beneath its rivers and lakes that are navigable at the time of statehood.² Describing this ownership, the U.S. Supreme Court has stated:

Under English common law the English Crown held sovereign title to all lands underlying navigable waters When the 13 Colonies became independent . . . they claimed title to the lands under navigable waters . . . as the sovereign successors to the . . . Crown. Because all subsequently admitted States enter the Union on an "equal footing" with the original 13 States they too hold title to the land under navigable waters within their boundaries³

Thus the states owned, and still own, the original riverbeds of navigable rivers.⁴ But when a federal dam is built, artificially flooding adjoining dry land and creating an enlarged navigable waterway, who holds title to the newly submerged land? While the question could be argued legally several ways, people commonly assume that title remains in the dam builder who condemned it. This article argues otherwise: that ownership by the respective states is more persuasive, both legally and on the basis of public policy. In a case of first impression, the outcome will likely be shaped as much by public policy considerations as by application of the law.⁵

Not all federal reservoirs were created by the same agency or even under similar statutes.⁶ The principal statute, the Federal Power Act,⁷ allows a licensee to obtain a permit from the Federal Power Commission, now the Federal Energy Regulatory Commission (FERC), to construct a dam on navigable waterways for generating electrical power. In many cases, however, reservoirs were authorized by special legislation.⁸

To facilitate the task of building dams, all the applicable federal statutes empower each licensee to condemn or otherwise pay

2. See *Arizona Ctr. for Law v. Hassell*, 837 P.2d 158, 161 (Ariz. Ct. App. 1991).

3. *Utah Div. of State Lands v. United States*, 482 U.S. 193, 195-96 (1987) (citations omitted).

4. See *Barney v. Keokuk*, 94 U.S. 324 (1877); *Pollard's Lessee v. Hagan*, 44 U.S. (3 How.) 212 (1845).

5. See *Bonelli Cattle Co. v. Arizona*, 414 U.S. 313, 328-29 (1973), *reh'g denied*, 434 U.S. 1090, *overruled in part by*, *Oregon ex rel. State Land Bd. v. Corvallis Sand & Gravel Co.*, 429 U.S. 363 (1977).

6. See, e.g., *supra* note 1.

7. Federal Power Act 16 U.S.C. § 797 (1994)

8. See, e.g., Fort Peck Reservoir Act, Pub. L. No. 75-529, 52 Stat. 403 (1938).

for the land to be flooded.⁹ After reservoir completion, the licensees sell services such as electricity and irrigation water that, over time, pay for the cost of acquiring land and constructing the dam.

Many dam licensees, since condemning the newly submerged lands, may have paid property taxes on the those lands, not including the original riverbeds which the licensees generally admit to be property of the respective states.¹⁰ In all likelihood, however, few surveys have been conducted to locate or mark the banks of natural riverbeds beneath reservoirs. To what extent it would be technically possible now to identify historic riverbeds presents difficult factual considerations. Similarly, some states may have assessed taxes on dams and submerged lands on the basis of depreciated cost, while others may have used some other valuation. Despite these variations from state to state and dam to dam, sufficient factual consistency remains to draw common public policy and legal conclusions.

III.

PUBLIC POLICY CONSIDERATIONS

The dam licensees/condemners would no doubt seek to characterize state claims to these basins as a sort of "land grab." After all, the utilities *paid* for the flooded land and may have been paying taxes on it. State claims may be seen by them as little more than legalized mugging.

But the public policy question is most appropriately framed as: Who should obtain the benefit of the unforeseen increase in value of submerged lands — the collective citizens of the affected states, the shareholders of electric utilities, or the federal government? The issue is so framed in light of the following seven considerations.

First, the states hold title to submerged lands not as a private landowner, but in trust for their citizens.¹¹ This function of government has a long history.¹²

9. See, e.g., Federal Power Act 16 U.S.C. § 814 (1995); Reclamation Act of 1902 § 7, 43 U.S.C. § 421 (1994).

10. See, e.g., Letter from Michael E. Zimmerman, Vice President and General Counsel, MPC, to Tommy Butler, Agency Counsel, Montana Department of State Lands, (Dec. 4, 1991); Letter from Susan Callaghan, Legal Department, MPC, to Tommy Butler, DSL (Feb. 5, 1992).

11. See *Illinois Cent. R.R. v. Illinois*, 146 U.S. 387 (1892). See, e.g., Constitution of Montana, Art. X, §§ 2, 3, 4 & 11 (1972), entitled, "Public land trust, disposition."

12. See discussion and authorities *supra* note 2 and *infra* note 48.

Title to beds beneath navigable waters is held by the sovereign as a public trust for the public. "Such waters . . . are incapable of ordinary and private occupation, cultivation and improvement; and their natural and primary uses are public in their nature, for highways of navigation and commerce, domestic and foreign, and for the purpose of fishing"13

The states' diverse and evolving interests in submerged public lands constitute a basic attribute of their sovereignty.¹⁴

[T]he beds and shores of [navigable] waters . . . properly belong [] to the states by their inherent sovereignty, and the United States has wisely abstained from extending (if it could extend) its survey and grants beyond the limits of high water Such title being in the state, the lands are subject to state regulation and control, under the condition, however, of not interfering with the regulations which may be made by Congress with regard to public navigation and commerce.¹⁵

Not only is the state's trust ownership protected from undue federal influence, but the state itself is subject to significant fidu-

13. 101 Ranch v. United States, 905 F.2d 180, 182-83 (8th Cir. 1990) (quoting *Bonelli Cattle Co. v. Arizona*, 414 U.S. 313, 322 (1973) (citations omitted)).

14. The U.S. Supreme Court now appears to recognize that the states' interests in lands beneath tidal and navigable water are much broader than just navigational concerns. Those interests also include, at least, fishing, urban expansion, and oystering. See *Phillips Petroleum Co. v. Mississippi*, 484 U.S. 469, 476 (1988). And the Court explicitly accepted Mississippi's claimed interests in the lands predicated on "bathing, swimming, recreation, fishing, and mineral development." *Id.* at 482. The Court decided the case in favor of state ownership of all lands affected by tides because they "share those 'geographical, chemical and environmental' qualities that make lands beneath tidal waters unique." *Id.* at 481. The dissent recognizes two dispositive purposes for state ownership of submerged lands, navigability, and "preserving to the public the use of navigable waters from private interruption and encroachment." The dissent agrees that state ownership may carry out other functions as well. *Id.* at 488 (O'Connor, J., dissenting).

The purposes for the states trusts in submerged lands have been summarized by one scholar as follows:

More recent cases have held that the trust includes a broader range of public uses than were recognized in earlier cases; it is now held that the trust protects varied public recreational uses in navigable waters, such as the right to fish, hunt and swim. The trust is a dynamic, rather than static, concept and seems destined to expand with the development and recognition of new public uses.

Roderick E. Walston, *The Public Trust Doctrine in the Water Rights Context: The Wrong Environmental Remedy*, 22 SANTA CLARA L. REV. 63, 66 (1982) (footnotes omitted). The states' interests have also been held to include scenic beauty, which may include building a civic center that is visually harmonious with the water. See *City of Madison v. State*, 83 N.W.2d 674, 678 (Wis. 1957).

15. *Kansas v. Colorado*, 206 U.S. 46, 93-94 (1906).

ciary responsibilities, described by the Supreme Court in the landmark case of *Illinois Central R.R. Co. v. Illinois*:¹⁶

The State can no more abdicate its trust over property in which the whole people are interested, like navigable waters and soils under them . . . than it can abdicate its police powers in the administration of government and the preservation of the peace [T]he use of such powers may for a limited period be delegated to a municipality or other body, but there always remains with the State the right to revoke those powers and exercise them in a more direct manner, and one more conformable to its wishes. So with trusts connected with public property, or property of a special character, like lands under navigable waters, they cannot be placed entirely beyond the direction and control of the State.¹⁷

The states' public trust responsibilities for submerged lands are serious and subject to equally serious judicial scrutiny.¹⁸ No doctrine of federal jurisprudence matches the scope and rigor of the "public trust doctrine" that has been developing in some state courts. In any case, it is settled that states' responsibilities for navigable waters constitutes a fiduciary trust.¹⁹

Second, a federal licensee obtains a special, uniquely-governmental privilege — the right to condemn land. This privilege is granted by Congress on the premise that power-generation, reclamation, and flood-control enhance the collective public welfare. Although regulated utilities are ordinarily expected to turn a profit from their permitted activities, underwater resource exploitation probably well exceeds the bounds of Congress' expectations for its dam licensees.²⁰ Courts should therefore be quite circumspect about expanding the privileges of the licensees under the federal acts, especially when the right claimed by the licensee has nothing to do with the purposes of the enabling federal legislation.²¹

16. *Illinois Cent. R.R. Co. v. Illinois*, 146 U.S. 387 (1892).

17. *Id.* at 453.

18. See, e.g., *Arizona Cent. for Law v. Hassell*, 837 P.2d 158, 168-69 (Ariz. Ct. App. 1991) (invalidating statutes that relinquished state ownership of submerged lands for unquantified consideration); *Kootenai Env'tl. Alliance, Inc. v. Panhandle Yacht Club, Inc.*, 671 P.2d 1085 (Idaho 1983); Joseph L. Sax, *The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention*, 68 MICH. L. REV. 471 (1970), quoted *infra* note 45.

19. See *supra* note 18.

20. See generally, Federal Power Act, *supra* note 1.

21. Strict construction of permitted purposes within the enabling statutes is consistent with principles of condemnation law. Eminent domain is a sovereign function of government exercised for public purposes. PATRICK J. ROHAN ET AL., NICHOLS' THE LAW OF EMINENT DOMAIN, §3.11 [1] (3d ed. 1991). The state may, by

A third public policy consideration is the probability that mineral rights and habitat in these reservoirs were little-valued — if they were valued at all — in the acquisition process. If nothing were paid for mineral rights, subsequent mineral discovery becomes an unbargained-for benefit. When a court interprets the special privileges given federal power licensees, deciding the ownership of such unforeseen benefits should therefore be strongly influenced by public welfare considerations and contractual concerns about unjust enrichment.

Fourth, the public's interest in reservoir management must be considered.²² Anyone who extracts resources from a reservoir obviously will be subject to police power regulations of Congress and the state legislature. However, if the states own the resources beneath federal reservoirs, political considerations will also restrain their activities. If licensees are deemed the owners of these minerals, the only public control over their exploitation would be through the police-power, recognized by many courts as a lighter, less-effective form of resource management.²³ If owned by the federal government, resource development may escape state regulation entirely.²⁴

Fifth, whatever moneys were paid by the dam builders to purchase the reservoir basins, the consumers/rate-payers have long-since been repaying whenever they pay for water power or irrigation. To allow the licensees to also benefit from the ex-

statute, delegate the power to public or private entities to carry out designated activities. *Id.* This power to delegate resides exclusively in the legislature. *Id.* at § 3.21. The delegation to private corporations “. . . must be conferred in express terms or by necessary implication.” *Id.* at § 3.21 [4].

One of the most firmly established principles of the law of eminent domain is that the burden is on a party seeking to exercise the power of eminent domain to show a warrant from the legislature either in express terms or by necessary implication. . . . The burden is also on the condemnor to show that it is acting within the scope of statutory power.

Id. at § 3.213.

Even when the power has been expressly granted, the grant, itself, and the extent thereof will be construed strictly against the grantee. The latter will not be allowed to take the lands of another unless such right comes clearly and unmistakably within the limits of the authority granted.

Id. at § 3.213 [1]. None of the federal acts in question explicitly empower the condemnor to defeat state riparian laws.

22. See *supra* note 14 and accompanying text (summarizing the state's interest in submerged lands).

23. See *State v. Superior Ct. of Placer County*, 625 P.2d 256, 260 (Cal. 1981).

24. See *California v. FERC*, 495 U.S. 490, 498 (1990); *Sayles Hydro Assoc. v. Maughan*, 985 F.2d 451, 455 (9th Cir. 1993); *First Iowa Hydro-Electric Coop. v. F.P.C.*, 328 U.S. 152, 178 (1946).

ploitation of minerals and other resources under the reservoirs would result in double-payment for the privilege of being a federal licensee — unless, of course, those revenues can be used to offset electricity rates. The same perspective applies to the property taxes paid on the submerged lands.

A sixth consideration arises from the Federal Power Act, which treats the licensee's rights to the dam facility as a non-ownership interest. The Act views the facility ratepayers as the real parties in interest. Federal Power Act licenses are granted only for 50 years.²⁵ At expiration the U.S. government may take over the facility by paying the licensee its "net investment" plus reasonable damages.²⁶ The concept of "net investment" has been consistently treated — not as "fair market value," or even as original cost — but as the original cost discounted by depreciation of the facility.²⁷ The Federal Power Commission explained the rationale for this minimal compensation to the licensee.

What could be clearer than the requirement that accrued depreciation, *which has been paid for by the ratepayers in the rates charged to them*, should be applied to the reduction of the cost of licensee's investment? Depreciation is a cost of operations, collected by licensee from its ratepayers under its allowed rates, because depreciation is a return of capital investment, which has been expended or used up in rendering services to ratepayers. *To fail to reduce investment by accrued depreciation collected from ratepayers would cause them to pay for the return of depreciated investment not once but repeatedly.*²⁸

Thus, the FPC (and now FERC) explicitly recognizes that the real persons out-of-pocket for a dam and flooded lands are the consumers who pay their utility bills; it appropriately denies the utility any compensation for taking that for which it already has been, or is being, paid. Also, as a result of the net investment concept, the federal government over time pays nothing for the flooded lands — the consumers pay for it all even if the federal government later claims the dam as its own under the Act.

25. See WILLIAM F. FOX, FEDERAL REGULATION OF ENERGY § 32.10 (1983).

26. See Federal Power Act § 21, 16 U.S.C §§ 807, 808 (1994).

27. See *Niagara Falls Power Co. v. FPC*, 137 F.2d 787 (6th Cir. 1943), *cert. denied*, 320 U.S. 792 (1943), *reh'g denied*, 320 U.S. 815 (1943); *Louisville Gas & Elec. Co. v. FPC*, 129 F.2d 126 (6th Cir. 1942), *cert. denied*, 318 U.S. 761 (1942), *reh'g denied*, 318 U.S. 800 (1942).

28. In re *Alabama Power Co.*, 89 P.U.R 3d 473, 484 (Ala.P.S.C. 1971) (quoting In re *Niagara Falls Power Co.*, 9 F.P.C 228, 243, Opinion No. 200 (1950) (emphasis added)).

In light of the net investment concept, title to the flooded lands should be vested in the consumers who ultimately pay for them. Because doing so is impossible under existing law, title should vest in some trustee for the benefit of the ratepayers. Neither the federal government or the utility has such a fiduciary responsibility. But the states do.²⁹ As the most immediate democratic representative of the ratepayers' interests, the states are the best choice of trustee for the ratepayers.

A seventh consideration concerns the problem of identification of submerged boundaries. Because the state admittedly owns the original riverbed, and cannot *by law* relinquish that interest,³⁰ either the state also obtains title to the whole submerged basin or the state's riverbed interest must be distinguished from the rest. Physically making that distinction is probably difficult to do, especially in heavily silted reservoirs. The policy of some courts such as the Supreme Court of California is to resolve such factually insoluble issues in favor of the state.³¹

These seven public policy factors plainly militate in favor of state reservoir ownership. Whether these policies may prevail in the courts puts the legal issues at center stage.

IV.

LEGAL CONSIDERATIONS

The legal issue remains: Whether, when land is artificially flooded creating a lake under the Federal Power Act³² and other federal legislation,³³ the state owns the artificially submerged land, or whether title remains in the condemnor, or vests in someone else.³⁴ Answering this question requires addressing a series of linked issues:

29. See discussion *supra* pp. 3-4.

30. See *supra* note 18.

31. See, e.g., *State v. Superior Ct. of Placer County*, 625 P.2d 256 (Cal. 1981); *Village of Pewaukee v. Savoy*, 79 N.W. 436 (Wis. 1899).

32. 16 U.S.C. §§ 791-828 (1994).

33. See, e.g., Reclamation Act of 1902, Pub. L. No. 57-161, 32 Stat. 388 (1902) (codified as amended in scattered sections beginning at 43 U.S.C. §371); Fort Peck Reservoir Act, Pub. L. No. 75-529, 52 Stat. 403 (1938).

34. "Ownership" in the case of submerged lands implies at least these rights: To regulate or prohibit artifact collection and shipwreck salvage, see *Subaqueous Exploration & Archaeology, Ltd. v. Unidentified, Wrecked Vessel*, 577 F. Supp. 597 (Md. 1983); the right to own and dredge for minerals and gravel, see *Missouri River Sand Co. v. Commissioner of Internal Revenue*, 774 F.2d 334, 335 (8th Cir 1985); and ownership and regulation of oil, see *Commissioner of Internal Revenue v. Southwest Exploration Co.*, 350 U.S. 308 (1956).

- A. Which law applies — federal or state?
- B. What do state laws provide?
- C. If federal law applies, to whom does it grant ownership of the reservoir beds?
- D. As against federal licensees does the Submerged Lands Act grant to the states minerals and natural resources under federal reservoirs?

A. *Which law applies — federal or state?*

Upon admission to the union, each state obtained ownership of all the land below the average seasonal high-water line of navigable³⁵ rivers and lakes.³⁶ This ownership is subject to change over time as the forces of accretion, erosion, reliction, submergence, or avulsion change the configuration of basins.³⁷ The federal courts ordinarily defer to state law to define and regulate the nature and extent of property rights below this shifting high-water mark.³⁸

In the case of artificial reservoirs, however, it is unclear whether the federal courts will apply the results of state law — when they claim ownership of submerged land for the particular state — or whether they will apply federal law. While the result of either appears to be the same, in state jurisprudence the conclusion is likely to be more clear.³⁹ State courts have dealt explicitly with ownership of intentionally impounded reservoirs; federal courts have not.⁴⁰

The Supreme Court, in *Corvallis Sand & Gravel*, established at least four exceptions under which federal common law will displace state law in deciding questions of navigable water bounda-

35. Whether a body of water is navigable is initially a question of federal law. *See* *Utah v. United States*, 403 U.S. 9 (1971); *Alaska v. United States*, 754 F.2d 851 (9th Cir. 1985).

36. *Utah Div. of State Lands v. United States*, 482 U.S. 193 (1987); *Oregon ex rel. State Land Bd. v. Corvallis Sand & Gravel Co.*, 429 U.S. 363, 370-74 (1977).

37. *Montana v. United States*, 450 U.S. 544, 550 (1981). For an explanation of these concepts, see text and authorities beginning *infra* at note 49. Their legal history in Roman and English law is explained in detail in *Jefferis v. East Omaha Land Co.*, 134 U.S. 178 (1889).

38. *See, e.g., Oregon ex rel. State Land Bd. v. Corvallis Sand & Gravel*, 429 U.S. 363 (1977).

39. *Compare* text and authorities on state law discussion *infra* notes 47-116, with federal law discussion, beginning *infra* at note 117.

40. *See, e.g., Village of Pewaukee v. Savoy*, 79 N.W. 436 (Wis. 1899); *State v. Superior Ct. of Placer County*, 625 P.2d 256 (Cal. 1981).

ries.⁴¹ These exceptions include express federal conveyances predating statehood, interstate boundaries, conflicts involving the navigational servitude, and determination of boundaries at the time of statehood. Later in *California Lands*, the court explicitly purported to apply the *Corvallis* exceptions, but added a key fifth exception — that “a dispute . . . over . . . land . . . where [riparian] title rests with or was derived from the Federal Government is to be determined by federal law.”⁴²

Preferring the application of state law, most states would argue that none of the *Corvallis* exceptions is applicable, while the licensees would likely rely on *California Lands*' fifth exception to the *Corvallis* rule. However, unlike the *California Lands* case, the creation of an artificial reservoir does not present a situation where the “United States Government has never parted with title and its interest in the property continues.”⁴³ In contrast, the federal licensees of artificial reservoirs are newcomers whose sole title derives from the condemnation privileges granted them under various Commerce Clause legislation.⁴⁴

The states further may attack the applicability of the *California Lands* exception on the basis of preserving federalism. Using the Federal Power Act, the Reclamation Act or others, via the *California Lands* exception, to displace state riparian ownership laws would deprive the states of a fundamental attribute of state sovereignty — title and control over submerged lands.⁴⁵ To do so, Congress' intent should be explicit and clear within the legislation itself — not created years later by judicial implication. This argument conforms with most recent Supreme Court decisions on federal state relations.⁴⁶

41. See *Corvallis Sand & Gravel*, 429 U.S. at 375-76.

42. *California ex rel. State Lands Comm'n v. United States*, 457 U.S. 273, 283 (1982); see *Hughes v. Washington*, 389 U.S. 290 (1967). In *Hughes*, the boundary waters of the nation were also a factor.

43. *California ex rel. State Lands Comm'n*, 457 U.S. at 282.

44. See, e.g., statutes cited *supra* note 1.

45. According to one scholar:

[C]ertain interests are so intrinsically important to every citizen that their free availability tends to mark the society as one of citizens rather than of serfs. It is thought that, to protect those rights, it is necessary to be especially wary lest any particular individual or group acquire the power to control them. The historic public rights of fishery and navigation reflect this feeling; . . . Thus, American law courts held it “inconceivable” that any person should claim a private property interest in the navigable waters of the United States.

Sax, *supra* note 18, at 484.

46. See, e.g., *New York v. United States*, 120 L.Ed.2d 120, 140 (1992); *Gregory v. Ashcroft*, 501 U.S. 452 (1991); *Taffin v. Levitt*, 493 U.S. 455 (1990); *Will v. Michigan*

Practically speaking, on questions of navigable waters, it appears that what the federal courts do is use state law to decide “what” a state claims to own, while federal law determines what a state may be “entitled to claim.”⁴⁷ While this approach resolves the choice of law issue, it does so by subjecting the states’ claims to a double hurdle of both federal and state law. Because resolving the choice of law issue appears unlikely, federal courts will probably subject state claims to both legal regimes.

B. *What do state laws provide?*

1. General state rules of watership basin ownership.

Each state by law may determine questions of ownership and use of their lands below the seasonal high water line, subject to the federal constitutional power to regulate navigation. All thirty-eight states whose courts have considered the issue have claimed title to lands under navigable waters in trust for their citizens.⁴⁸

Most state cases related to navigable waterways involve problems of natural changes to the watercourses, whether from accretion, reliction, and erosion, or by avulsion.⁴⁹ Such changes affect the title of the various riparian parties. Most states apply fairly similar rules — called “littoral” or “riparian” rights. Where the bank of the lake or river slowly decreases by erosion

Dept. of State Police, 491 U.S. 58 (1989); *Atascadero State Hospital v. Scanlon* 473 U.S. 234 (1985); *National League of Cities v. Usery*, 426 U.S. 833 (1976); *Maryland v. Wirtz*, 392 U.S. 183 (1968); *United States v. River Rouge Improvement Co.*, 269 U.S. 411 (1926).

47. See *Oregon ex rel. State Land Bd. v. Corvallis Sand & Gravel*, 429 U.S. at 375; *California ex rel. State Lands Comm’n v. United States*, 457 U.S. 273, 283 (1982).

48. See *Arizona Ctr. for Law in Pub. Interest v. Hassell*, 837 P.2d 158, 167 n. 13 (Ariz. Ct. App. 1991).

49. A slow washing-away of a riverbank is called “erosion.” See RICHARD R. POWELL, *THE LAW OF REAL PROPERTY* 607-11 (1991); see, e.g., *Jackson v. Burlington Northern*, 667 P.2d 406, 407 (Mont. 1983). Gradual growth of a river bank through the deposition of material from upstream (called alluvium), is known as “accretion.” See *California ex rel. State Lands Comm’n v. United States*, 805 F.2d 857, 860 n.1 (9th Cir. 1986); BLACK’S LAW DICTIONARY 36 (4th ed. 1968). The gradual dropping or lowering of water level in a lake or stream is “reliction,” more properly referred to as “dereliction.” *Id.* The opposite of reliction is “submergence” which applies to bodies of water whose levels have risen, covering adjoining lands. See *101 Ranch v. United States*, 714 F. Supp. 1005, 1014 n.7 (D.N.D. 1988), *aff’d*, 905 F.2d 180 (8th Cir. 1990); *Michelsen v. Leskiewicz*, 55 N.Y.S.2d 831, 838 (1945); BLACK’S LAW DICTIONARY 1594 (4th ed. 1968). Finally, by contrast, the doctrine of “avulsion” applies to a sudden change in the course of a body of water, such as the cutting of a new channel by a flood. See *United States v. Eldredge*, 33 F. Supp. 337 (D. Mont. 1940).

or submergence, the riparian owner loses land and the state gains additional water bottom.⁵⁰ An increase in the bank, under reliction and accretion rules, causes the reverse to occur.⁵¹ If, on the other hand, the change to the watercourse is sudden, as where a storm cuts a new channel, and the land masses are identifiable to a particular owner, the doctrine of avulsion leaves title with the original owner.⁵² To distinguish avulsion from the other changes, courts have followed the *Lovington* test, which states that avulsive change must be sudden. Avulsion is never, according to the Court, "gradual and imperceptible. . . . It is not enough that the change may be discerned by comparison at two distinct points of time. [Avulsion] must be perceptible when it takes place."⁵³

Because of the novelty of the question of submerged lands ownership, only generalizations can be made about state law claims to artificial federal reservoirs. However, statutes and recent cases from California, together with older cases from other jurisdictions, illustrate the probable arguments to emerge from state courts.

2. California state claims to ownership beneath reservoirs.

California's claims to navigable waterways date at least from the California Civil Code of 1872.⁵⁴ Based thereon, a recent California Supreme Court case has rendered the clearest applicable state court decision in a set of pivotal cases involving several con-

50. See sources cited *supra* note 48.

51. See *California ex rel. State Lands Comm'n v. United States*, 805 F.2d 857, 860 n.1. (9th Cir. 1986); *Hogue v. Bourgois*, 71 N.W. 2d 47 (N.D. Ct. App. 1955).

52. See, e.g., CAL. CIV. CODE ANN., § 1015 (West 1982); *United States v. El-dredge*, 33 F. Supp. 337 (D. Mont. 1940).

53. *County of St. Clair v. Lovington*, 90 U.S. (23 Wall.) 46, 68 (1874). See also *Philadelphia Co. v. Stimson*, 223 U.S. 605 (1912).

54. CAL. CIV. CODE § 670 (Deering 1903) (now, CAL. CIV. CODE ANN. § 670 (West 1982)) provides in pertinent part:

State property. The State is the owner of all land below tide water, and below ordinary high-water mark, bordering upon tide water within the State; of all land below the water of a navigable lake or stream.

CAL. CIV. CODE § 830 (Deering 1903)(now, CAL. CIV. CODE ANN. § 830 (West 1982)) respectively provides:

Water as boundary. Except where the grant under which the land is held indicates a different intent, the owner of the upland, when it borders on tidewater, takes to ordinary high-water mark; when it borders upon a navigable lake or stream, where there is no tide, the owner takes to the edge of the lake or stream, at low-water mark; when it borders upon any other water, the owner takes to the middle of the lake or stream.

troversies about ownership and rights to California's vast expanse of coastline, rivers and lakes.⁵⁵

For several years, the California attorney general had maintained that the state owned title up to the high-water mark on all navigable bodies of water.⁵⁶ The private plaintiffs in the *Lyon* and *Placer County* cases were all owners of riparian lands adjoining various lakes. In the *Placer County* case, plaintiffs owned wharves and docks between the low and high-water marks on Lake Tahoe threatened by the State's announced intention to record a notice of its claims.⁵⁷ In the *Lyon* case, plaintiffs disputed ownership of marshlands between their property and a navigable lake.⁵⁸ Plaintiffs in both cases sought to quiet title in themselves.

Taken together, these two cases presented three issues to the California Supreme Court:⁵⁹

1. In the case of navigable, fresh-water lakes and rivers, who owns title to the land below the mean high water line — the state or the adjoining riparian landowner?⁶⁰
2. Regardless of title, is the land below the mean high water line subject to a use trust in favor of the public?⁶¹
3. For purposes of applying the two preceding holdings, where are the high and low water lines measured — at the historic natural level of the lake, or at the contemporary water lines, artificially raised by a dam?⁶²

The court, cognizant of the enormous consequences of its decision,⁶³ reviewed English and American common law and applica-

55. See *State v. Superior Ct. of Lake County (Lyon)*, 625 P.2d 239 (Cal. 1981), *cert. denied*, 454 U.S. 865 (1981), *reh'g denied*, 454 U.S. 1094 (1981); *State v. Superior Ct. of Placer County*, 625 P.2d 256 (Cal. 1981); *cert. denied*, 454 U.S. 865 (1981), *reh'g denied*, 454 U.S. 1094 (1981); *City of Berkeley v. Superior Ct.*, 606 P.2d 362 (Cal. 1980).

56. See *Superior Ct. of Lake County (Lyon)*, 625 P.2d at 241.

57. See *Placer County*, 625 P.2d at 257-58.

58. See *Sup. Ct. of Lake County (Lyon)*, 625 P.2d at 241-242.

59. *Placer County* treats only one of the pertinent issues. To fully understand it one must also read its companion case, *Lyon*. See *Placer County*, 625 P.2d at 257. *City of Berkeley* dealt with tidal areas, and is not further discussed.

60. See *State v. Superior Ct. of Lake County (Lyon)*, 625 P.2d 239, 241 (Cal. 1981), *cert. denied*, 454 U.S. 865 (1981), *reh'g denied*, 454 U.S. 1094 (1981).

61. See *id.*

62. See *State v. Superior Ct. of Placer County*, 625 P.2d 256, 260 (Cal. 1981).

63. The Court said:

The case involves issues which are of vast importance to the general public as well as to the owners of land bordering upon navigable lakes and streams. The significance of these issues has generated extensive briefs by amici curiae, . . . No less than 4,000 miles of shoreline along 34 navigable lakes and 31 navigable rivers in

ble statutory history. The collective holdings in *Lyon* and *Placer County* can be summarized as follows:

1. *Title below high water line*: At statehood the state of California became absolute owner of all land below the high water line.⁶⁴ However, in 1872, through the enactment of California's waterline statutes, the land between high and low water marks was conveyed to adjoining riparian owners.⁶⁵
2. *Public use trust*: The public has a beneficial right to use the private lands between high and low water marks, and the State is trustee of that right.⁶⁶
3. *Natural water line or artificial water line*: In implementing the foregoing holdings, the water marks are to be measured at their current levels, artificially raised by dams.⁶⁷

Two aspects of these decisions are important to the issue of federal dams. First, the California Supreme Court expressly held that the state's waterline statutes do not merely state principles of construction, but constitute an affirmative "conveyance" or "grant of thousands of linear miles of lands."⁶⁸ If these statutes are to be treated as a conveyance granting all land *above* the low-water mark to adjoining landowners, then these sections must equally be regarded as a "claim" to all flooded lands *below* the low water mark.⁶⁹ Any other interpretation would injure the state and its inhibit its trust responsibilities to its citizens.

Second, and most important, when called upon to decide whether its far-reaching property rights decisions should apply to natural, historic water levels or to current water levels artificially raised by dams, the California court chose to use current artificial

the state are involved. Substantial areas of land will be affected by our decision; at Clear Lake alone, there is a difference of 5,000 acres in the surface area of the lake between high and low water, and the Anderson Marsh constitutes one-half of the remaining fresh water marsh at Clear Lake.

Sup. Ct. of Lake County (Lyon), 625 P.2d at 242.

64. *See id.* at 246.

65. *See State v. Superior Ct. of Lake County (Lyon)*, 625 P.2d 239, 246-48 (Cal 1981), *cert. denied*, 454 U.S. 865 (1981), *reh'g denied*, 454 U.S. 1094 (1981).

66. *See id.* at 249-51.

67. *See State v. Superior Ct. of Placer County*, 625 P.2d 256, 260-61 (Cal. 1981).

68. *See Sup. Ct. of Lake County (Lyon)*, 625 P.2d at 246, 248

69. This is like the treatment accorded 43 U.S.C. § 1313 exceptions to the Submerged Lands Act. The Act conveys land below the water to the states, but that section makes certain exceptions to the conveyance. The Courts have treated those exceptions not merely as a reservation of right, but as an affirmative claim. *See California ex rel. State Lands Comm'n v. United States*, 805 F.2d 857 (9th Cir. 1986).

levels. Besides Lake Tahoe, the court made clear that its decision was applicable to all non-tidal lakes and rivers in the state.⁷⁰

The *Placer County* court expressed two theories for its holdings. First, the physical difficulty of reconstructing the historic natural water levels in light of their currently flooded condition suggested that reliction and submergence principles settle ownership in the state.⁷¹ The court said:

The monumental evidentiary problem which would be created by measuring the boundary line between public and private ownership in accordance with the water level which existed prior to the construction of these dams provides a convincing justification for accepting the current level of the lake as the appropriate standard.⁷²

Notably, the *Placer County* court did not mention reliction or submergence doctrines by name. But its rationale — avoiding property line disputes — is deemed one of two fundamental reasons for those rules.⁷³

Secondly, the court also used principles of prescription or adverse possession to justify the shift of title from the shoreline owners to the State.⁷⁴ In doing so, the court relied on a string of similar dam-impoundment cases from other jurisdictions.⁷⁵

70. See *State v. Superior Ct. of Lake County (Lyon)*, 625 P.2d 239, 242 (Cal 1981), cert. denied, 454 U.S. 865 (1981), reh'g denied, 454 U.S. 1094 (1981); *Placer County*, 625 P.2d at 259.

71. See *Placer County*, 625 P.2d at 261.

72. *Id.* Note however, that California's law of accretion and reliction in rivers is different both *by statute* and common law from most other states since it distinguishes whether the accretion occurs naturally or artificially. See CAL. CIV. CODE ANN. § 1014 (West 1982). In California, unnaturally caused accretions are treated as avulsions. See *California ex rel. State Lands Comm'n v. United States*, 805 F.2d 857 (9th Cir. 1986); *United States v. Harvey*, 661 F.2d 767, at 770 (9th Cir 1981).

Section 1014 should be inapplicable to federal dam situations, because it expressly applies (1) only to accretions in rivers. In *City of Los Angeles v. Anderson*, 275 P. 789, 791 (Cal. 1929), the statute was construed strictly to rivers and the court instead used common law to leave accreted tideland in the state's ownership when littoral owners artificially caused accretions to the seashore. Similarly, a breakwater constructed by the city (as successor to the state), causing erosion of unnaturally accreted beach did not deprive littoral owners of property. *Carpenter v. City of Santa Monica*, 147 P.2d 964 (Cal. Ct. App. 1944).

73. See *Hughes v. Washington*, 389 U.S. 290, 293-94 (1967).

74. See *id.*

75. See *State v. Superior Ct. of Placer County*, 625 P.2d 256, 261 (Cal. 1981) (citing *State v. Parker*, 200 S.W. 1014 (Ark. 1918)); *State v. Sorenson*, 271 N.W. 234 (Iowa 1937) (citing *Diana Shooting Club v. Lamoreux*, 89 N.W. 880 (Wis. 1902)); *Kray v. Muggli*, 86 NW 882 (Minn. 1901); *Taggart v. Jeffrey*, 76 A. 123 (N.H. 1910); *Village of Pewaukee v. Savoy*, 79 N.W. 436 (Wis. 1899). See also *State of New York v. System Properties Inc.*, 141 N.E.2d 429, (N.Y. 1957); *Delany v. Boston*, 2 Del (1.

Crucial to the California court were significant policy considerations. The court expressed concern that in private hands only the police power would constrain environmental damage and exploitation of sensitive marshlands and watercourses.⁷⁶ If there are resources to be exploited beneath California's artificial navigable reservoirs, the public's interests in these lands are better protected under the localized political control of state trust ownership than in private or federal hands.⁷⁷

The policy and legal statements of the California court apply with even greater force to federal dams. Unlike the thousands of innocent landowners who lost submerged land pursuant to *Placer County* and *Lyon*, federal dam licensees are not innocent bystanders. To obtain privileges under federal legislation they volunteered to purchase and flood the submerged land, and did so in the face of the claims of at least thirty-eight states to own all lands beneath navigable waters.⁷⁸

3. State claims in historic cases.

Theories from older cases adopted the concept of the uninjured volunteer to endorse state ownership of artificially created waterways. Such theories, including those of de facto dedication and estoppel have been raised in many courts.⁷⁹ The theories provide essentially that when a developer builds a dam and floods his own land, he implicitly dedicates the submerged land and waters to the state. Thereafter, he is estopped to preclude public use and ownership rights. If the public use continues for the statute of limitations, he loses title by prescription as well.

Harr.) 489 (1839); Henry P. Farnham, *The Law of Waters & Water Rights* § 427 (1904).

76. See *State v. Superior Ct. of Placer County*, 625 P.2d 256, 260 (Cal. 1981).

77. The states' interests are enumerated and discussed *supra* note 14.

78. A similar situation of long-standing state claims was presented in a case resolving ownership of Mississippi tidal lands. Oil companies argued that they and their predecessors-in-interest had long held recorded title, and paid taxes on non-navigable tidal lands. Nevertheless, the Court ruled in favor of State ownership, saying:

Here, Mississippi law appears to have consistently held that the public trust in lands under water includes "title to all the land under tidewater." Although the Mississippi Supreme Court acknowledged that this case may be the first where it faced the question of the public trust interest in nonnavigable tidelands, the clear and unequivocal statements in its earlier opinions should have been ample indication of the State's claim to tidelands.

Phillips Petroleum Co. v. Mississippi, 484 U.S. 469, 482 (1988) (citations omitted).

79. See Alvin E. Evans, *Riparian Rights in Artificial Lakes and Streams*, 16 Mo. L. Rev. 93 (1951).

The seminal case is *Village of Pewaukee v. Savoy*, 103 Wis. 271, 79 NW 436 (1899),⁸⁰ which said:

When the owner of the land raised the lake level so as to cover it, such land immediately became subject to use by the public as a part of the natural lake bed, not by permission of the owner of the paper title, but by the same right that the public used any other part of the lake. . . . [This] brings into play the principle of estoppel in pais, which precludes him from revoking what is legally considered a dedication of his land affected by his acts, to the public use.⁸¹

The California Supreme Court's *Placer County* decision derives from *Village of Pewaukee*.⁸² Though announcing the courts' decisions under varying theories, numerous other courts have also adopted or followed *Village of Pewaukee*.⁸³ Some adopted the estoppel rationale, as illustrated in *Hammond v. Antwerp Light & Power Co.*,⁸⁴ and *State v. Malmquist*, 114 Vt 96, 40 A2d 534 (1944).⁸⁵ Other courts have used the dedication rationale to enforce public use rights as the Texas court did in the case of *Diversion Lake Club v. Heath*,⁸⁶ although it did not reach issues of ownership of the lake bed.

Also citing *Village of Pewaukee*, *Wilbour v. Gallagher* used a prescription rationale.⁸⁷ It held *Wilber v. Gallagher*, 77 Wash. 2d 306, 462 P2d 232 (1969) that private littoral owners could not "re-take" submerged lands by backfilling so as to deprive their neighbors of access to the raised lake level.⁸⁸ A number of other cases achieved this result by finding a reciprocal prescriptive easement.⁸⁹ The reciprocal prescriptive easement theory was re-

80. *Village of Pewaukee v. Savoy*, 79 N.W. 436 (Wis. 1899).

81. *Id.* at 438.

82. See *State v. Superior Ct. of Placer County*, 625 P.2d 256, 261 (Cal. 1981) (citing *State v. Parker*, 200 S.W. 1014, 1016 (Ark. 1918) (citing *Village of Pewaukee v. Savoy*, 79 N.W. 436 (Wis. 1899))).

83. See *Evans*, *supra* note 78 at 111-13.

84. *Hammond v. Antwerp Light & Power Co.*, 230 N.Y.S. 621 (N.Y. App. Div. 1928).

85. *State v. Malmquist*, 40 A.2d 534 (Vt. 1944).

86. *Diversion Lake Club v. Heath*, 58 S.W.2d 566, 571 (Tex. Civ. App. 1933), *aff'd*, 86 S.W.2d 441 (Tex. 1935).

87. *Wilbour v. Gallagher*, 462 P.2d 232 (Wash. 1969)

88. See *id.* at 241. See also *Burrus v. Edward Rutledge Timber Co.*, 202 P. 1067 (Idaho 1921).

89. See *Marshall Ice Co. v. La Plant*, 111 NW 101 (Iowa 1907); *Kray v. Muggli*, 86 N.W. 882 (Minn. 1901); *Smith v. Youmans*, 70 N.W. 1115 (Wis. 1897); *Warren v. Westbrook Mfg. Co.*, 33 A. 665 (Me. 1895); *Belknap v. Trimble*, 3 Paige Ch. 577 (1832).

jected in *Lake Drummond Canal & Water Co. v. Burnham*, 147 NC 41, 60 SE 650 (1908), but the court accepted the dedication/estoppel theory where upland owners relied on the permanent change.⁹⁰ Finally, giving no theory at all but reaching the same result was *Conneaut Lake Ice Co. v. Quigley*, 74 A 648 (Pa. 1909).⁹¹

4. Critics of state ownership claims.

Only a few courts have declined to adopt the *Village of Pewaukee* approach.⁹² The most prominent are *Coastal Industrial Water Authority v. York*, 532 SW 2d 949 (Tex 1976) (hereinafter *CIWA*),⁹³ and *Tapoco, Inc. v. Peterson*, 213 Tenn. 335, 373 SW2d 605 (1963).⁹⁴

The *CIWA* case held that artificially subsided land adjoining the Houston ship channel should be paid for in a later condemnation by the state channel authority. The subsidence appeared to be caused at least in part by actions of the state. The subsided land was quite shallow and could easily be identified because of a 20 year old survey. The opinion is ambiguous as to whether it is premised on a rejection of the submergence rule,⁹⁵ or on avulsion theory.⁹⁶

CIWA fails to distinguish between ordinary submergence situations and reemergence,⁹⁷ which would give rise under most authorities to the doctrine of "reemergence."⁹⁸ The *CIWA* holding was also premised in part on a misreading of the court's own precedents. It cited *Diversion Lake Club v. Heath*⁹⁹ as rejecting state ownership of the bed of an artificial navigable lake. In fact, the Texas Supreme Court's very brief language to that effect in

90. See *Lake Drummond Canal & Water Co. v. Burnham*, 60 S.E. 650, 653 (N.C. 1908).

91. See *Conneaut Lake Ice Co. v. Quigley*, 74 A. 648, 651 (Pa. 1909).

92. See generally 88 A.L.R. 131, § III b annots. at 136-40 (1934). See also 78 AM. JUR 2d *Waters* § 56 for both points of view. Comment at 63 A.L.R. 3d 249, § 5 cmt. per rule 3.5 (1975), notes that California decisions generally favor the state more than other states. See Farnham, *supra* note 75, at § 430 (criticizing *Village of Pewaukee*, arguing that neither prescription nor dedication supports the state's gaining title to the submerged lands).

93. *Coastal Indus. Water Auth. v. York*, 532 S.W.2d 949, 953 (Tex 1976).

94. *Tapoco, Inc. v. Peterson*, 373 S.W.2d 605 (Tenn. 1963).

95. See *Coastal Indus. Water Auth.*, 532 S.W.2d at 954.

96. See *id.* at 952-53.

97. See *id.*

98. See WATERS AND WATER RIGHTS § 6.03(b)(2) (Robert E. Beck ed. 1991).

99. *Diversion Lake Club v. Heath*, 58 S.W.2d 566 (Tex. Civ. App. 1933), *aff'd.*, 86 S.W.2d 441 (Tex. 1935).

Heath was dictum.¹⁰⁰ *Heath* dealt *only* with public use of the waters for navigation and recreation — uses which the *Heath* supreme court sustained. The court of appeals opinion which it affirmed made clear that ownership rights to the submerged land were not at issue in *Heath*.¹⁰¹ In fact, both the court of appeals¹⁰² and the supreme court in *Heath* looked with favor on, and ultimately followed, the *Village of Pewaukee* line of cases, saying:

When the irrigation company . . . constructed the dam across the river, it caused by its voluntary act the flood waters of the river, public waters, to spread over the land which it had acquired, submerging and in effect destroying a portion of the river bed, and giving to the public waters a new bed. This artificial change in the river and its bed did not affect the public nature of the waters and did not take away the right of the public to use them for fishing.¹⁰³

The Tennessee Supreme Court in *Tapoco, Inc. v. Peterson* pointedly rejected the *Village of Pewaukee* approach,¹⁰⁴ and like *CIWA*, did so without citing or discussing any of the *Village of Pewaukee* line of cases. It held that a power company that built a dam on a navigable river as a licensee under the Federal Power Act did not lose title to its voluntarily submerged lands. The power company had sued to enjoin the private owners of houseboats from continuing to moor them on the lake. The court held [a] that the power company retained title to the submerged lands,¹⁰⁵ and that [b] mooring houseboats was not a “public” use of the lake.¹⁰⁶

Tapoco is faulty authority for four reasons: First, the court’s opinion about state ownership should be regarded as dictum because the court’s second rationale — that permanent, private houseboats are not a public use — would alone achieve its result with much less drastic legal consequences.¹⁰⁷ Second, the only precedent for *Tapoco* derives exclusively from a 1913 Tennessee case that cited no authority whatever on the point.¹⁰⁸ In fact, the primary thrust of the 1913 *West Tennessee Land* case was the ex-

100. See *Diversion Lake Club v. Heath*, 86 S.W.2d 441, 446 (Tex. 1935).

101. See *Heath*, 58 S.W.2d at 571 (Tex. Civ. App. 1933).

102. See *id.*

103. *Heath*, 86 S.W.2d at 446 (Tex. 1935) (citing *Village of Pewaukee*).

104. See *Tapoco, Inc. v. Peterson*, 373 S.W.2d 605, 607 (Tenn. 1963).

105. See *id.*

106. See *id.* at 608.

107. See *id.*

108. See *id.* at 607 (citing *State v. West Tenn. Land Co.*, 158 S.W. 746, 752 (Tenn. 1913)).

pansion of the state's rights under Tennessee law.¹⁰⁹ Third, the state was not a party to *Tapoco*, so the State of Tennessee's ownership interest could not have been adequately briefed and argued. Finally, the *Tapoco* case was factually unusual because of the proven identifiability of the power company's submerged lands.¹¹⁰

Another, much older case that disagrees with the *Village of Pewaukee* approach is *Schulte v. Warren*,¹¹¹ in which hunters and fisherman were enjoined from hunting and fishing on navigable waters overlying plaintiff's land. The land had been flooded because of the construction of a dam and canal by the state (which had not condemned the land before flooding it). The court assumed, without citation or discussion, that title to the submerged land remained with plaintiff.¹¹² From that premise the court reasoned that the public's right to navigate on the waters above plaintiff's land did not include the right to hunt and fish.¹¹³ The state of Illinois was not a party to the case.¹¹⁴

In summary, the anti-*Pewaukee* cases appear to be minority decisions applying consistently faulty scholarship. None of them meaningfully briefed and considered state ownership and trust considerations as they should in deciding issues of such major public importance.¹¹⁵ In *Schulte v. Warren* and *Tapoco* the state was not even a party. All these minority cases either cite no authority, weak authority, or seriously misinterpret prior cases.

The majority view, following *Village of Pewaukee*, should prevail. The dam licensees have voluntarily built structures that expand the submerged domain. The dam-builder was subject to understanding that most, if not all, states claim title to those under-water lands. Just as the dam builder knew or should have known his newly constructed lake would automatically become subject to the public's right of navigation,¹¹⁶ he also knew, or

109. See *State v. West Tenn. Land Co.*, 158 S.W. 746, 749-52 (Tenn. 1913).

110. See *Tapoco, Inc. v. Peterson*, 373 S.W.2d 605, 607 (Tenn. 1963).

111. *Schulte v. Warren*, 75 N.E. 783 (Ill. 1905).

112. See *id.* at 785.

113. See *id.* at 787. Such a conclusion is now in doubt, if not wholly repudiated, by *Montana v. United States*, 450 U.S. 544, 555-558 (1981).

114. See also *Lake Drummond v. Burnham*, 60 S.E. 650 (N.C. 1908).

115. Compare *State v. Superior Ct. of Placer County*, 625 P.2d 256, 257 (Cal. 1981); *State v. Superior Ct. of Lake County*, 625 P.2d 239, 241 (Cal. 1981); with *Arizona Center v. Hassell*, 837 P.2d 158, 160-161 (Ariz. App. 1991).

116. See *Georgia Power Co. v. Baker*, 830 F.2d 163 (11th Cir. 1987); *Diversion Lake Club v. Heath*, 58 S.W.2d 566, 571 (Tex. Civ. App. 1933), *aff'd.*, 86 S.W.2d 441 (Tex. 1935); *Farnham*, *supra* note 74, § 427.

should have known, the newly submerged lands would become part of the trust property of the state.

C. *If Federal law applies, to whom does it grant ownership of the reservoir beds?*

Federal courts seem to be of many minds about what constitutes federal law when confronted with ownership cases involving navigable waterways. Some say there is no "federal common law."¹¹⁷ Others blithely apply "federal law" without blinking.¹¹⁸ Still others feel obligated to extract some state's law to use as the "federal law."¹¹⁹ There seems to be little consistency here.

This discussion therefore assumes, that any resolution on the merits in a federal court can be taken as more or less defining "federal law" — without regard to whether the court has borrowed the law from a state, followed other federal courts, or made it up on the spot. The federal issues to be considered are:

- (1) Whether any special rules apply if the federal government is one of the property claimants;
- (2) what would be the effect of reliction and submergence on the state's ownership of rivers and lake bottoms vis a vis competing riparian or littoral owners;
- (3) whether artificially caused relictions and submergences are treated the same as natural ones; and
- (4) whether federal dams that create reservoirs out of rivers are subject to the same rules as artificially caused submergences?

1. Do any special rules apply if the federal government is one of the property claimants.

This issue appears well-settled. Federal claims to land on, under and beside navigable watercourses are the same as that of a private landowner.¹²⁰ On the other hand, certain doctrines of law simply will not apply to the federal government as a land-

117. See *Oregon ex rel. State Land Bd. v. Corvallis Sand & Gravel Co.*, 429 U.S. 363 (1977).

118. See *California ex rel. State Lands Comm'n v. United States*, 457 U.S. 273, 284 (1982); *Hughes v. Washington*, 389 U.S. 290 (1967); *101 Ranch v. United States*, 905 F.2d 180, 182 n.3 (8th Cir. 1990); *United States v. Claridge*, 279 F. Supp. 87, 91 n.5 (D. Ariz. 1967), *aff'd.*, 416 F.2d 933 (9th Cir. 1969).

119. See *Wilson v. Omaha Indian Tribe*, 442 U.S. 653 (1979); *United States v. Harvey*, 661 F.2d 767, 770-71 (9th Cir. 1981).

120. See *Jefferis v. East Omaha Land Co.*, 134 U.S. 178 (1889); *Rice v. Railroad Co.*, 66 U.S. (1 Black) 358 (1861); *United States v. Eldredge*, 33 F. Supp. 339 (D. Mont. 1940); *Wiltse v. Bolton*, 272 N.W. 197 (Neb. 1937); *Bigelow v. Herrink*, 205 N.W. 531 (Iowa 1925); *Rex v. Lord Yarborough*, 3 Barn. & C. 91 (K.B. 1827).

owner, or will apply only if modified.¹²¹ It is possibly important to determine whether the federal claim is an exercise of paramount sovereign rights or of a proprietary interest.¹²² Proprietary interests are more likely to be subject to the same law as private persons, while paramount acts (like navigation regulation) will be treated differently.¹²³

2. What would be the effect of reliction and submergence on the state's ownership of rivers and lake bottoms vis a vis competing riparian or littoral owners?

Settled federal case law fully adopts the doctrines of accretion, reliction, erosion, and submergence.¹²⁴ Rivers and lakes are presumed to have changed by these modes absent proof to the contrary of avulsive change.¹²⁵

In *101 Ranch v. United States*,¹²⁶ when considering substantial amounts of private farmland flooded by the rising waters of a navigable lake, the Eighth Circuit held:

In order for the states to guarantee full public enjoyment of their navigable watercourses, the sovereign's title automatically follows gradual changes in the boundary of a water body. For terminal lakes . . . the doctrines of reliction and submergence define the boundary between public and private interests.¹²⁷

As a result, the court held:

[P]laintiff's position is directly contrary to the public trust principles upon which the doctrines of navigability, submergence, and

121. Prescription will not apply against the federal government. See *Eldredge*, 33 F. Supp. at 339 (D. Mont. 1940). Equitable estoppel requires a showing of affirmative misconduct. See *United States v. Harvey*, 661 F.2d 767 (9th Cir. 1981); *Beaver v. United States*, 350 F.2d 4 (9th Cir. 1965).

122. See *United States v. California*, 436 U.S. 32, 39 (1978).

123. See discussion *infra* p. 30.

124. See *California ex rel. State Lands Comm'n v. United States*, 457 U.S. 273, 278 (1982); *Hughes v. Washington*, 389 U.S. 290 (1967); *Jefferis v. East Omaha Land Co.*, 134 U.S. 178, 190 (1890); *County of St. Clair v. Lovington*, 90 U.S. (23 Wall.) 46, 50-66 (1874); *Napeahi v. Paty*, 921 F.2d 897 (9th Cir. 1990) (applying Hawaii law per *Corvallis Sand*); *United States v. Harvey*, 661 F.2d 767 (9th Cir. 1981) (applying Arizona law per *Omaha Indian Tribe*); *United States v. Claridge*, 279 F. Supp. 87, 91 n.5 (D. Ariz. 1967), *aff'd*, 416 F.2d 933 (9th Cir. 1969) (applying federal law).

125. See *Nebraska v. Iowa*, 143 U.S. 359 (1892); *Arizona v. Bonelli Cattle*, 464 P.2d 999, 1005 (Ariz. Ct. App. 1970); *Peterson v. Morton*, 465 F. Supp. 986 (D. Nev. 1979).

126. *101 Ranch v. United States*, 905 F.2d 180 (8th Cir. 1990).

127. *Id.* at 183 (citations omitted). The State of North Dakota had conveyed all its right, title and interest in Devils Lake to the U.S. Government by deed, and therefore the U.S. stood in the state's shoes in *101 Ranch*. The changes in lake level were predominately naturally caused. See *id.* at 183 n.6.

reliction are based. Ownership of the bed of navigable streams and lakes is vested in the state because "such waters . . . are incapable of ordinary and private occupation" . . . [A]lthough plaintiff indisputably received title to certain relicted lands through the 1929 judgment and the 1949 quitclaim deed, we find plaintiff in each instance received only such rights as it was entitled to have as a riparian owner upon public waters. To the extent the water level of Devils Lake continues to fluctuate, plaintiff will be entitled to any relicted lands But as for lands which are or will become submerged, neither the 1929 judgment nor the 1949 quitclaim deed are effective to defeat the public's interest in West Bay as a navigable waterway.¹²⁸

101 Ranch is the only explicit federal submergence case; numerous federal authorities regularly apply the reliction, erosion, and accretion part of the rule.¹²⁹

In *Bonelli Cattle Co. v. Arizona*,¹³⁰ the U.S. Supreme Court spelled out the inherent interrelationship between accretion/reliction and erosion/submergence.

By requiring that the upland owner suffer the burden of erosion and by giving him the benefit of accretions, riparianess is maintained. . . [T]here is a compensation theory at work. Riparian land is at the mercy of the wanderings of the river. Since a riparian owner is subject to losing land by erosion beyond his control, he should benefit from an addition to his lands by the accretions thereto which are equally beyond his control.¹³¹

3. Whether artificially caused relictions and submergences are treated the same as natural ones.

Federal courts firmly agree that artificially caused reliction, submergence, accretion and erosion are to be treated in the same manner as naturally caused events.¹³² This artificial-change rule

128. *Id.* at 184-85 (citations omitted). See also *101 Ranch v. United States*, 714 F. Supp. 1005, 1014 n.7 (D. N.D. 1988); *In re Ownership of Bed of Devil's Lake*, 423 N.W.2d 141, 143-44 (N.D. 1988); *Michelsen v. Leskowitz*, 55 N.Y.S.2d 831 (1945).

129. See authorities *supra* note 124.

130. *Bonelli Cattle Co. v. Arizona*, 414 U.S. 313 (1973), *reh'g denied*, 434 U.S. 1090, *overruled in part by Oregon ex rel. State Land Bd. v. Corvallis Sand & Gravel Co.*, 429 U.S. 363 (1977).

131. *Bonelli Cattle*, 414 U.S. at 326.

132. See *California ex rel. State Lands Comm'n v. United States*, 457 U.S. 273, 284 (1982); *Jefferis v. East Omaha Land Co.*, 134 U.S. 178, 190 (1890); *County of St. Clair v. Lovington*, 90 U.S. (23 Wall.) 46, 50-66 (1874); *United States v. Stoeco Homes*, 498 F.2d 597 (3rd Cir. 1974); *Burns v. Forbes*, 412 F.2d 995 (3rd Cir. 1969); *Beaver v. United States*, 350 F.2d 4 (9th Cir. 1965), *cert. denied*, 383 U.S. 937; *Jackson v. United States*, 56 F.2d 340 (9th Cir. 1932); *Roberts v. Brooks*, 78 F. 411 (2d

is exemplified by *United States v. Claridge*,¹³³ where Hoover Dam had narrowed the Colorado river and caused it to flow along the western side of its basin (the California side of the river). Previously it flowed much farther to the east (the Arizona side). The U.S. government was the riparian fastlands owner on the east side. The court quieted title in the federal government to the lands between the natural eastern water line and the artificial eastern water line (located farther to the west). Arizona lost title to the former riverbed and lands adjoining it.¹³⁴

In *United States v. Harvey*,¹³⁵ the U.S. government, as riparian landowner on the California side of the Colorado river, sued to quiet title and evict 162 private lot owners in a residential subdivision. The owners all held deeds which correctly recited the physical description of the land but repeated the 1914 patent language saying the land was located in Yuma County, Arizona. In fact, years before, as a result of Hoover dam and other artificial improvements, the river had completely shifted its channel, passing over the contested land.¹³⁶ Thus, the subdivision was actually on the Imperial County, California side of the river which was owned by the federal government. The law of accretion/erosion was held to apply regardless of its cause, and the United States was declared owner of the subdivision land.¹³⁷

In *California ex rel. State Lands Comm'n v. United States*,¹³⁸ the court defined the distinction between avulsion and reliction of an artificially changed lake based on the cause as well as the speed of the change.¹³⁹ At issue was ownership of 12,000 relicted

Cir. 1897); *Alexander Hamilton Life Ins. Co. v. Gov't. of Virgin Islands*, 573 F. Supp. 429 (D. V.I. 1983); *Mordale v. Waxberg*, 84 F. Supp. 1004 (D. Alaska 1949); *Reid v. State ex rel. Alabama State Docks Dept.*, 373 So.2d 1071 (Ala. 1979); *Brun- dage v. Knox*, 117 NE 123 (Ill. 1917); *Adams v. Roberson*, 155 P. 22 (Kan. 1916); *Michaelson v. Silver Beach Improvement Ass'n, Inc.*, 173 N.E.2d 273 (Mass. 1961); *Harrison v. Guice*, 140 So.2d 838 (Miss. 1962); *In re Neptune Ave. v. Agloff*, 262 N.Y.S. 679 (1933); *Tatum v. St. Louis*, 28 S.W. 1002 (Mo. 1894); *State ex rel. Duffy v. Lakefront E. Fifty-Fifth St. Corp.*, 27 N.E.2d 485 (Ohio 1940); *Gillihan v. Cieloha*, 145 P. 1061 (Or. 1915); *Horgan v. Jamestown*, 80 A. 271 (R.I. 1911); *Memphis v. Waite*, 52 S.W. 161 (Tenn. 1899). See also *Evans, supra* note 79, at 106-10.

133. *United States v. Claridge*, 279 F. Supp. 87 (D. Ariz. 1967), *aff'd*, 416 F.2d 933 (9th Cir. 1969).

134. See *Id.* at 90-91.

135. *United States v. Harvey*, 661 F.2d 767 (9th Cir. 1981), *cert. denied*, 459 U.S. 833 (1982).

136. See *id.* at 772.

137. See *id.* at 771-72.

138. *California ex rel. State Lands Comm'n v. United States*, 805 F.2d 857 (9th Cir. 1986).

139. *Id.* at 861.

acres on the shores of Mono Lake — artificially drained by water consumption from the City of Los Angeles. The court applied the *Lovington* test to distinguish avulsion from reliction, “[A]s to what is gradual and imperceptible. . . It is not enough that the change may be discerned by comparison at two distinct points of time. It must be perceptible when it takes place.”¹⁴⁰ The court compared the lowering of Mono Lake to “a riparian owner’s sudden loss of property when a river violently changes course.”¹⁴¹ The drawdown of Mono Lake thus divested the State of California of the relicted land notwithstanding that the reliction was artificially caused.¹⁴²

Although later overruled on an another issue, *Bonelli Cattle v. Arizona*,¹⁴³ also applied the federal artificial change rule. Bonelli sued the State of Arizona to quiet title to land adjoining the Colorado River. Bonelli acquired riparian title ultimately traceable to a federal patent. Previously the river had meandered over a very wide area but slowly moved eastward flooding most of Bonelli’s land which earlier had been dry. A federal rechanneling project subsequently narrowed and confined the river within discrete banks farther west. The State of Arizona argued that the artificial channel should be analogized to an avulsion since it was sudden and discrete and the respective land masses were identifiable; thus Arizona would retain ownership within the natural meanders of the river.¹⁴⁴

The *Bonelli Cattle* court however, applying federal law, called the artificially provoked changes of the channel an accretion to Bonelli’s land, saying,

The doctrine of accretion applies to changes in the river course due to artificial as well as natural causes. Where accretions to riparian land are caused by conditions created by strangers to the land, the upland owner remains the beneficiary thereof.¹⁴⁵

140. *Id.* at 865 (citing *County of St. Clair v. Lovington*, 90 U.S. (23 Wall) 46, 68 (1874)).

141. *California ex. rel.*, 805 F2d, at 865.

142. *See id.* at 864 (relying on *Jones v. Johnston*, 59 US (18 How.) 150 (1856), and *Banks v. Ogden*, 69 U.S. (2 Wall.) 57 (1865)).

143. *Bonelli Cattle Co. v. Arizona*, 414 U.S. 313 (1973), *reh’g denied*, 434 U.S. 1090, *overruled in part by Oregon ex rel. State Land Bd. v. Corvallis Sand & Gravel Co.*, 429 U.S. 363 (1977).

144. *See id.* at 316-17.

145. *See id.* at 327 (citations omitted).

Federal courts thus consistently refuse to distinguish artificially caused accretion, erosion, reliction and submergence from naturally caused events.

4. Whether federal dams that create reservoirs out of rivers are subject to the same rules as artificially caused submergences?

This is a corollary to the previous issue. Unlike the states which have dealt with dam submergences before, no federal cases appear to have done so. This corollary thus has no direct answer in federal case law.

Dams, however, are nothing more than artificially created submersions. The same artificial change rule should apply to settling the states' submerged land claims that the federal courts have used in cases like *Harvey*, *Claridge*, and *Bonelli Cattle*, for accretions,¹⁴⁶ stream channeling,¹⁴⁷ dredging,¹⁴⁸ and relictions.¹⁴⁹

One variation on the artificial change rule, however, is *Bonelli Cattle's* rationale for fashioning federal common law in the light of artificial changes to watercourses. It created and applied a balancing test between accretion rules and avulsion rules on the basis of public policy considerations. Specifically, the court inquired whether the policy of accretion or avulsion was most socially useful in the situation.¹⁵⁰ The Supreme Court has never reiterated the *Bonelli* test, and it appears to have been followed in very few cases.¹⁵¹ More commonly, federal courts appear to apply the artificial change rule.¹⁵²

Using the balancing test, the *Bonelli* Court reasoned that Arizona's interest in navigability of the river was not harmed by the

146. See *California ex rel. State Lands Comm'n v. United States*, 457 U.S. 273, 284 (1982); *Hughes v. Washington*, 389 U.S. 290 (1967).

147. See *United States v. Harvey*, 661 F.2d 767 (9th Cir. 1981); *United States v. Claridge*, 279 F. Supp. 87 (D. Ariz. 1967).

148. See *United States v. 1,629.6 Acres of Land*, 503 F.2d 764, 771 (3rd Cir. 1974).

149. See *California ex rel. State Lands Comm'n v. United States*, 805 F.2d 857 (9th Cir. 1986).

150. See *Bonelli Cattle Co. v. Arizona*, 414 U.S. 313, 328-29 (1973), *reh'g denied*, 434 U.S. 1090, *overruled in part by Oregon ex rel. State Land Bd. v. Corvallis Sand & Gravel Co.*, 429 U.S. 363 (1977).

151. See *United States v. 1,629.6 Acres of Land*, 503 F.2d 764, 771 (3rd Cir. 1974); *Miller v. United States*, 550 F. Supp. 669 (Ct. Cl. 1982). In *Miller*, the Court of Claims used the *Bonelli Cattle* policy consideration principles to re-vest title to an old river bed with the navigation servitude (which had been drained due to Corps stream-channelization).

152. See authorities *supra* notes 144-47.

channelization but was in fact enhanced by it.¹⁵³ Thus the artificial channelization was treated as an accretion/erosion situation rather than as an avulsion, because doing so preserved riparian access to the river as well as the state's interest in the land under the water.¹⁵⁴

In the case of federal reservoirs, the same logic should yield an opposite result from a factually converse situation. *Bonelli* was concerned about the riparian access to the water, about the *quid pro quo* of erosion and accretion, and about the purposes of state ownership of submerged land. Those same policy concerns, for the reasons detailed in the *Bonelli* public policy discussion, suggest that submergence doctrine is the better rationale. Only submergence rules would make it possible for the states to administer the submerged land in trust according to fiduciary principles. Applying avulsion rules would allow the Bureau of Land Management or private power licensees to speculate on mining and other exploitive uses of the waterways that may be incompatible with navigation, power generation, and environmental considerations. Applying avulsion rules by judicial fiat would expand the powers and functions of federal licensees into areas not remotely contemplated by Congress in the enabling federal legislation.

Application of the artificial change rule by federal courts to state submerged land claims would be consistent with long-standing authorities. The application of public policy criteria as suggested in *Bonelli Cattle* would encourage the same result.

D. *As against federal licensees, does the Submerged Lands Act grant to the states minerals and natural resources under federal reservoirs?*

An argument may be constructed under the Submerged Lands Act¹⁵⁵ that regardless of the outcome under federal or state common law, the Act affirmatively conveyed all mineral and natural resources under federal reservoirs in navigable rivers to the states.¹⁵⁶ The states would argue that regulation of navigation —

153. *Bonelli Cattle's* assumption that navigation constitutes a state's only interest in submerged lands is now suspect in light of *Phillips Petroleum Co. v. Mississippi*, 484 U.S. 469, 481-82 (1988), which acknowledges state interests in fishing, urban development, recreation, mineral development, and environmental concerns. See text and authorities *supra* note 14.

154. See *Bonelli Cattle*, 414 U.S. at 328-29.

155. 43 U.S.C. §§ 1311-15 (1994).

156. See *United States v. California*, 436 U.S. 32, 37 (1978).

i.e., building dams for power, etc. — is a “paramount” or “sovereign” function of the federal government. All ownership rights to submerged land created by those functions were expressly quitclaimed to the states by the Submerged Lands Act.¹⁵⁷

This argument suffers two weaknesses. First, the Act is often quoted as having no impact other than codifying the “equal footing” doctrine, which takes one right back to federal common law.¹⁵⁸ The second and biggest obstacle to such state claims is the exception in §1313 of “all lands acquired by the United States by eminent domain proceedings, purchase, cession, gift or otherwise in a proprietary capacity.”

The states’ argument in rebuttal would be two fold. First, the §1313 exception expressly applies only to “lands acquired by the United States . . . in a proprietary capacity.” A “proprietary capacity” is one that an ordinary landowner or municipality might assume.¹⁵⁹ The predominant theme of Congress in enacting the Submerged Lands Act was distinguishing between “proprietary” uses of submerged lands — which were generally given over to the states — and “paramount rights” activities — which belong inherently to the federal government (such as regulating navigation and commerce, waging war, etc.).¹⁶⁰ Therefore, lands acquired by purchase or condemnation in exercise of the paramount function of regulating navigation — by building dams — should not be subject to the exception.

Secondly, the states may argue that at the time most of these lands in question were condemned, long before enactment of the Submerged Lands Act, these were not “lands beneath navigable waters.” The exception only applies to lands that meet the Act’s definition — namely being “beneath navigable waters” and being purchased or condemned. At the time of purchase or condemnation the lands were not under water. Only where the two preconditions coexist should the exception of §1313 come into play.

The Submerged Lands Act may provide a vehicle to reach a conclusion of state ownership to submerged lands. That sound

157. *See id.* at 41.

158. *See Bonelli Cattle Co. v. Arizona*, 414 U.S. 313, 324-25 (1973), *reh’g denied*, 434 U.S. 1090, *overruled in part by Oregon ex rel. State Land Bd. v. Corvallis Sand & Gravel Co.*, 429 U.S. 363 (1977).

159. *See BLACK’S LAW DICTIONARY* 1384 (4th ed.1968).

160. *See H.R. Rep. No 215* (1953), *reprinted in* 1953 U.S.C.C.A.N. 1385, 1421, 1430.

arguments may be fashioned on both sides of the issue makes it a vehicle of last resort.

V.

CONCLUSION

While the result may be disturbing to dam-builders, law merges with public policy in supporting state claims of title to artificial reservoir beds. Prevailing principles of state law have supported the states for a century under theories varying from dedication and prescription to the law of submergence and reliction. Federal law focuses exclusively on submergence/reliction principles by strictly treating artificial watercourse changes like natural ones. The most important argument in favor of state ownership, however, is that utilities impose acquisition costs of their flood-basins on the entire rate-paying public and that, alone among the candidates, the states hold submerged lands in trust for the people.

